

LÖSUNG ZU 961:

a)

$$z_1 = -2 + 2i \quad z_2 = 1 + i$$

Polardarstellung der komplexen Zahlen:

$$z_1 = \sqrt{2^2 + 2^2} = \sqrt{8}$$

$$\varphi_1 = \arctan\left(\frac{2}{-2}\right) + 180^\circ = 135^\circ \quad z_1 = (\sqrt{8}; 135^\circ)$$

$$z_2 = \sqrt{1^2 + 1^2} = \sqrt{2}$$

$$\varphi_2 = \arctan\left(\frac{1}{1}\right) = 45^\circ \quad z_2 = (\sqrt{2}; 45^\circ)$$

$$z_1 : z_2 = (\sqrt{8}; 135^\circ) : (\sqrt{2}; 45^\circ) = \left(\frac{\sqrt{8}}{\sqrt{2}}; 135^\circ - 45^\circ\right) = (2; 90^\circ) = 2i$$

